



SEQUENCE LISTING

<110> BALU, PALANI

<120> NOVEL PEPTIDE DIMERS AS AGONISTS OF THE ERYTHROPOIETIN
(EPO) RECEPTOR, AND ASSOCIATED METHODS OF SYNTHESIS AND USE

<130> 0300-0005

<140> 09/449,064

<141> 1999-11-24

<160> 93

<170> PatentIn Ver. 2.1

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| Gly | Gly | Thr | Tyr | Ser | Cys | His | Phe | Gly | Pro | Leu | Thr | Xaa | Val | Cys | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Pro Gln

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| Gly | Thr | Tyr | Ser | Cys | His | Phe | Gly | Pro | Leu | Thr | Xaa | Val | Cys | Arg | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

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Pro Leu Gly Gly
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Arg Pro Ser Pro Lys Ala
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Pro Leu Gly Gly
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| Gly | Gly | Thr | Tyr | Ser | Cys | His | Phe | Gly | Pro | Leu | Thr | Xaa | Val | Cys | Lys |
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Pro Gln Gly Gly
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| Gly | Gly | Thr | Tyr | Ser | Cys | His | Phe | Gly | Pro | Leu | Thr | Val | Cys | Arg | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Gln Gly Gly

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| Gly | Gly | Thr | Tyr | Arg | Cys | Ser | Met | Gly | Pro | Met | Thr | Xaa | Val | Cys | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Pro Met Gly Gly
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Ala His Gly Gly
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| Gly | Gly | Asp | Tyr | Leu | Cys | Arg | Met | Gly | Pro | Ala | Thr | Xaa | Val | Cys | Gly |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |

| | | | |
|-----|-----|-----|-----|
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| | | | 20 |

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<400> 45

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| Gly | Gly | Leu | Tyr | Ser | Cys | Arg | Met | Gly | Pro | Ile | Thr | Xaa | Val | Cys | Thr |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |

| | | | |
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| | | | 20 |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Gly | Tyr | His | Cys | Arg | Met | Gly | Pro | Met | Thr | Xaa | Val | Cys | Arg |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |

Pro Val Gly Gly
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Pro Asp Gly Gly
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Pro Lys Gly Gly
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Pro Pro Gly Gly
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<221> MOD_RES

<222> (13)

<223> 1-Nal

<400> 50

Gly Gly Asp Tyr Trp Cys Arg Met Gly Pro Ser Thr Xaa Glu Cys Asn
 1 5 10 15

Ala His Gly Gly
 20

<210> 51

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
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<220>

<221> MOD_RES

<222> (13)

<223> 1-Nal

<400> 51

Gly Gly Lys Tyr Leu Cys Ser Phe Gly Pro Ile Thr Xaa Val Cys Ala
 1 5 10 15

Arg Tyr Gly Gly
 20

<210> 52
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<220>
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<400> 52
 Gly Gly Leu Tyr Lys Cys Arg Leu Gly Pro Ile Thr Xaa Val Cys Ser
 1 5 10 15

Pro Leu Gly Gly
 20

<210> 53
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<400> 53
 Gly Gly Ser Tyr Thr Cys Arg Phe Gly Pro Glu Thr Xaa Val Cys Arg
 1 5 10 15

Pro Asn Gly Gly
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<210> 54
 <211> 20
 <212> PRT
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<220>
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<220>
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<400> 54

Gly Gly Ser Tyr Ser Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Lys
 1 5 10 15

Pro Gly Gly Gly
 20

<210> 55

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> 1-Nal

<400> 55

Gly Gly Ser Tyr Thr Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Leu
 1 5 10 15

Pro Ala Gly Gly
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<210> 56

<211> 20

<212> PRT

<213> Artificial Sequence

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<220>

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<222> (13)

<223> 1-Nal

<400> 56

Gly Gly Leu Tyr Glu Cys Arg Met Gly Pro Met Thr Xaa Val Cys Arg
 1 5 10 15

Pro Gly Gly Gly
 20

<210> 57

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<223> 1-Nal

<400> 57

Gly Gly Asp Tyr Thr Cys Arg Met Gly Pro Ile Thr Xaa Ile Cys Thr
1 5 10 15

Lys Ala Gly Gly
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<210> 58

<211> 20

<212> PRT

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<223> Description of Artificial Sequence: Synthetic
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<220>

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<222> (13)

<223> 1-Nal

<400> 58

Gly Gly Val Tyr Ser Cys Arg Met Gly Pro Thr Thr Xaa Glu Cys Asn
1 5 10 15

Arg Tyr Val Gly
20

<210> 59

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<220>

<221> MOD_RES

<222> (13)

<223> 1-Nal

<400> 59

Gly Gly Ala Tyr Leu Cys His Met Gly Pro Ile Thr Xaa Val Cys Arg
1 5 10 15

Pro Gln Gly Gly
20

<210> 60
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<220>
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<400> 60
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Pro Val Gly Gly
 20

<210> 61
 <211> 20
 <212> PRT
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<220>
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<220>
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<400> 61
 Gly Gly Leu Tyr Leu Cys Arg Met Gly Pro Val Thr Xaa Glu Cys Gln
 1 5 10 15

Pro Arg Gly Gly
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<210> 62
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<223> 1-Nal

<400> 62

Gly Gly Leu Tyr Thr Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Leu
 1 5 10 15

Leu Pro Gly Gly
 20

<210> 63

<211> 20

<212> PRT

<213> Artificial Sequence

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<220>

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<222> (13)

<223> 1-Nal

<400> 63

Gly Gly Leu Tyr Thr Cys Arg Met Gly Pro Val Thr Xaa Val Cys Thr
 1 5 10 15

Gly Ala Gly Gly
 20

<210> 64

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<220>

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<222> (13)

<223> 1-Nal

<400> 64

Gly Gly Val Tyr Lys Cys Arg Met Gly Pro Leu Thr Xaa Glu Cys Arg
 1 5 10 15

Pro Thr Gly Gly
 20

<210> 65

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (13)

<223> 1-Nal

<400> 65

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Asp | Tyr | Asn | Cys | Arg | Phe | Gly | Pro | Leu | Thr | Xaa | Val | Cys | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | |
|-----|-----|-----|-----|
| Pro | Ser | Gly | Gly |
| | | | 20 |

<210> 66

<211> 20

<212> PRT

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<222> (13)

<223> 1-Nal

<400> 66

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Ser | Tyr | Leu | Cys | Arg | Phe | Gly | Pro | Thr | Thr | Xaa | Leu | Cys | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | |
|-----|-----|-----|-----|
| Ser | Ala | Gly | Gly |
| | | | 20 |

<210> 67

<211> 20

<212> PRT

<213> Artificial Sequence

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<222> (13)

<223> 1-Nal

<400> 67

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Ser | Tyr | Leu | Cys | Arg | Met | Gly | Pro | Thr | Thr | Xaa | Val | Cys | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Arg Met Gly Gly
20

<210> 68
<211> 20
<212> PRT
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<220>
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<223> 1-Nal

<400> 68
Gly Gly Ser Tyr Leu Cys Arg Phe Gly Pro Thr Thr Xaa Leu Cys Thr
1 5 10 15

Gln Arg Gly Gly
20

<210> 69
<211> 20
<212> PRT
<213> Artificial Sequence

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peptide

<220>
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<222> (13)
<223> 1-Nal

<400> 69
Gly Gly Trp Val Thr Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Gly
1 5 10 15

Val His Gly Gly
20

<210> 70
<211> 20
<212> PRT
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peptide

<220>

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<222> (13)

<223> 1-Nal

<400> 70

Gly Gly Gln Leu Leu Cys Gly Ile Gly Pro Ile Thr Xaa Val Cys Arg
 1 5 10 15

Trp Val Gly Gly
 20

<210> 71

<211> 22

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<220>

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<222> (13)

<223> 1-Nal

<400> 71

Gly Gly Lys Tyr Ser Cys Phe Met Gly Pro Thr Thr Xaa Val Cys Ser
 1 5 10 15

Pro Val Gly Arg Gly Val
 20

<210> 72

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<220>

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<222> (13)

<223> 1-Nal

<400> 72

Gly Gly Trp Val Tyr Cys Arg Ile Gly Pro Ile Thr Xaa Val Cys Asp
 1 5 10 15

Thr Asn Gly Gly
 20

<210> 73

<211> 20

<212> PRT
 <213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<222> (13)

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<400> 73

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Met | Tyr | Tyr | Cys | Arg | Met | Gly | Pro | Met | Thr | Xaa | Val | Cys | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | |
|-----|-----|-----|-----|
| Gly | Ala | Gly | Gly |
| | | | 20 |

<210> 74

<211> 20

<212> PRT

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<220>

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<222> (13)

<223> 1-Nal

<400> 74

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Thr | Thr | Gln | Cys | Trp | Ile | Gly | Pro | Ile | Thr | Xaa | Val | Cys | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | |
|-----|-----|-----|-----|
| Ala | Arg | Gly | Gly |
| | | | 20 |

<210> 75

<211> 20

<212> PRT

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<222> (13)

<223> 1-Nal

<400> 75

Gly Gly Pro Tyr His Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Gly
 1 5 10 15

Pro Val Gly Gly
 20

<210> 76

<211> 20

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> 1-Nal

<400> 76

Gly Gly Glu Tyr Arg Cys Arg Met Gly Pro Ile Ser Xaa Val Cys Ser
 1 5 10 15

Pro Gln Gly Gly
 20

<210> 77

<211> 22

<212> PRT

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Gly Gly Asn Tyr Thr Cys Arg Phe Gly Pro Leu Thr Xaa Glu Cys Thr
 1 5 10 15

Pro Gln Gly Gly Gly Ala
 20

<210> 78

<211> 20

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<400> 78

Gly Gly Ser Trp Asp Cys Arg Ile Gly Pro Ile Thr Xaa Val Cys Lys
 1 5 10 15

Trp Ser Gly Gly
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<210> 79

<211> 20

<212> PRT

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<223> 1-Nal

<400> 79

Gly Gly Leu Tyr Leu Cys Arg Met Gly Pro Gln Thr Xaa Met Cys Gln
 1 5 10 15

Pro Gly Gly Gly
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<210> 80

<211> 20

<212> PRT

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<223> 1-Nal

<400> 80

Gly Gly Asp Tyr Val Cys Arg Met Gly Pro Met Thr Xaa Val Cys Ala
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Pro Tyr Gly Arg
 20

<210> 81
 <211> 20
 <212> PRT
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<400> 81
 Gly Gly Trp Tyr Ser Cys Leu Met Gly Pro Met Thr Xaa Val Cys Lys
 1 5 10 15
 Ala His Arg Gly
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<210> 82
 <211> 20
 <212> PRT
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<220>
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<400> 82
 Gly Gly Lys Tyr Tyr Cys Trp Met Gly Pro Met Thr Xaa Val Cys Ser
 1 5 10 15
 Pro Ala Gly Gly
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<210> 83
 <211> 20
 <212> PRT
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<220>
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<220>
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<223> 1-Nal

<400> 83

Gly Gly Tyr Val Met Cys Arg Ile Gly Pro Ile Thr Xaa Val Cys Asp
 1 5 10 15

Ile Pro Gly Gly
 20

<210> 84

<211> 20

<212> PRT

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<222> (13)

<223> 1-Nal

<400> 84

Gly Ser Cys Leu Gln Cys Cys Ile Gly Pro Ile Thr Xaa Val Cys Arg
 1 5 10 15

His Ala Gly Gly
 20

<210> 85

<211> 20

<212> PRT

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<223> 1-Nal

<400> 85

Gly Gly Asn Tyr Phe Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Gln
 1 5 10 15

Arg Ser Val Gly
 20

<210> 86

<211> 20

<212> PRT

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<223> 1-Nal

<400> 86

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Arg Thr Gly Gly
 20

<210> 87

<211> 20

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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<222> (13)

<223> 1-Nal

<400> 87

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 1 5 10 15

Tyr Met Ala Gly
 20

<210> 88

<211> 20

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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Gly Gly Gln Tyr Leu Cys Thr Phe Gly Pro Ile Thr Xaa Leu Cys Arg
 1 5 10 15

Gly Ala Gly Gly
20

<210> 89
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<400> 89
Gly Gly Tyr Thr Thr Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Ser
1 5 10 15

Ala His Gly Gly
20

<210> 90
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<223> 1-Nal

<400> 90
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Pro Val Gly Gly
20

<210> 91
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 91

Gly Gly Asn Tyr Tyr Cys Arg Phe Gly Pro Ile Thr Phe Glu Cys His
 1 5 10 15

Pro Thr Gly Gly
 20

<210> 92

<211> 20

<212> PRT

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<220>

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<222> (13)

<223> 1-Nal

<400> 92

Gly Gly Glu Tyr Leu Cys Arg Met Gly Pro Met Thr Xaa Val Cys Thr
 1 5 10 15

Pro Val Gly Gly
 20

<210> 93

<211> 20

<212> PRT

<213> Artificial Sequence

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<222> (13)

<223> 1-Nal

<400> 93

Gly Gly Leu Tyr Thr Cys Arg Met Gly Pro Ile Thr Xaa Val Cys Leu
 1 5 10 15

Pro Ala Gly Gly
 20